

**Notice of Allowability**

Application No.

10/614,433

Examiner

Shefali D. Patel

Applicant(s)

GRAHAM ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/7/03.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20061215.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 8/28/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

JINGGEWU  
PRIMARY EXAMINER

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## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the box elements in Figures 1, 2, 3a and 3b (box 25, 38, 25, etc.) need to be labeled in accordance with 37 C.F.R. § 1.83(a) as stated infra. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specifically, 37 C.F.R. § 1.83(a) states that “the drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box).”

### ***Information Disclosure Statement***

2. The information disclosure statement filed on August 28, 2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because some of the references are not provided (the examiner found some citation by searching but is unable to locate the other non-considered references. Please provide the copies of them for them to be considered). It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Allowable Subject Matter***

3. Claims 1-7 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The instant invention defines a method for estimating a target specific spectral distribution on at least one target over a period of at least one time measurement in a sensor space having at least one spatial cell and at least one spectral cell as disclosed in Claim 1; and, a method for tracking at least one target over a period of at least one time measurement using batches of data obtained from sensors designed to detect energy signals from said target in a sensor space having at least one spatial cell and at least one spectral cell as disclosed in claim 2. The prior art of record fails to teach providing a spectral probability density function; calculating the component spatial cell probabilities for each said time measurement, for each said target and for the total number of said spatial cells; calculating the combined component spatial and spectral cell probabilities by taking the matrix outer product of said component, spatial cell probabilities and said provided spectral probability density function for each said target; summing said combined component spatial and spectral cell probabilities for all said targets to obtain a total combined spatial and spectral cell probability for all said targets; summing said total combined spatial and spectral cell probabilities for all said targets over all spectral cells and all spatial cells to obtain a total sensor space probability; calculating an expected sensor space measurement for all spectral cells and all spatial cells; determining the relative mode contributions for all said targets using the combined component spatial and spectral cell probabilities and the total combined spatial and spectral cell probability for all said targets; calculating the average spectral power on each said target using the relative mode contributions for all targets, the expected sensor space measurement for all spectral cells and spatial cells, the combined component spatial and spectral cell probabilities and the total combined spatial and spectral cell probability for all said targets over all time measurements; linking all of the average spectral powers of all of the targets to obtain a spectral distribution estimate for each of the targets; and displaying said spectral distribution estimates on a computer display screen for each said target.

These elements in combination with all of the other elements of the claims are not taught or fairly suggested in the prior art of record. The dependent claims are allowed for the same reasons.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shefali D Patel  
Examiner  
Art Unit 2624

sdp

JINGGE WU  
PRIMARY EXAMINER

